

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

A90.06
So3
1964

AD-33 Bookplate
(1-63)

NATIONAL

**A
G
R
I
C
U
L
T
U
R
A
L**



LIBRARY A90.06

82284

**So3
1964**

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Berkeley, California

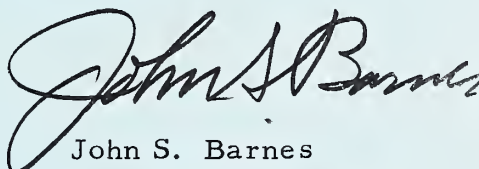
PLANT MATERIALS MEMORANDUM Cal-2 (Rev.) October 1, 1964

Re: Policy and Procedures for Conducting
Plant Materials Work in California.

This Memorandum cancels Plant Materials Memorandum Cal-2, dated June 1, 1957 (originally issued as California Memorandum SCS-27).

Plant Materials Memorandum SCS-1 (Rev.), dated April 26, 1963, sets forth Service Policies and Functions in Plant Materials. California Policies and Procedures within the framework of this memorandum are set forth in detail in the Plant Materials Handbook as revised June 1964.

Attachment



John S. Barnes
State Conservationist

AC	PT(W)
CA	SC (W)
Calif. Veg. Spec.	St. Soil Cons. (W)
Calif. Soil Spec.	TC
E&WP	WO
FCS	WU
PMC	FIU

PLANT MATERIALS HANDBOOK



OUR SOIL ★ OUR STRENGTH



UNITED STATES DEPARTMENT of AGRICULTURE - SOIL CONSERVATION SERVICE

**POLICY AND PROCEDURES FOR CONDUCTING PLANT
MATERIALS ACTIVITIES IN CALIFORNIA**

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
JAN 19 1965
C & R-PREP

REVISED JUNE 1964

**U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE**

John S. Barnes, State Conservationist

INDEX

POLICY AND PROCEDURES FOR CONDUCTING PLANT
MATERIALS ACTIVITIES IN CALIFORNIA

SECTION I

FUNCTIONS

	<u>Page</u>
General.	1
Pleasanton Plant Materials Center.	2
Functions of the Field Plant Materials Technician.	3
Functions of the Washington-Field Plant Materials Technician	5

SECTION II

OBSERVATIONAL ACTIVITIES AND REPORTING

General.	7
Project Methods and Procedures	8
Initial Studies.	8
Supplemental Studies and Field Evaluation Plantings.	8
Facilitating Studies	9
Special Studies.	9
Annual Work Plans for Observational Studies.	9
Initial Plant Materials Increase	10
Field Plantings in Soil Conservation Districts	10
Seed Increase Plantings in Soil Conservation Districts	13
Reporting Observational Studies.	17
1. Annual Technical Reports.	17
2. Annual Operations Reports	20

SECTION III

PRODUCTION, COLLECTION AND DISTRIBUTION OF PLANTING MATERIALS

Quotas and Requests.	23
Accession Records and Obtaining "P" Numbers.	24
Consolidated Seed and Planting Materials Requests.	24
Plans for Production and Collection.	25
Records of Quotas, Requests, Inventories, Allocations and Shipments.	25
Planting Materials Inventories	26
Seed Inventories	26
Shipment of Planting Materials	27
Reimbursement for Plant Materials Furnished.	27
Distribution Records of Seed and Plants.	29

APPENDIX

	<u>Page</u>
Exhibit "A" - Steps followed in Developing Improved Plant Materials. .	33
Exhibit "B" - Approved Projects - Pleasanton Plant Materials Center. .	34
Exhibit "C" - Form CF-31 (Rev. 8/1/62) - Planting Plan for Field Plantings.	35
Exhibit "D" - Form CF-73 - Preliminary Information on New Field Plantings.	36
Exhibit "E" - Form CF-23 (Rev. 7/1/64) - Report of Field Plantings . .	37
Exhibit "F" - Form CF-32 - Plan for Seed Increase Planting	38
Exhibit "G" - Table - Land Status and Acreage by Uses.	39
Exhibit "H" - Table - Number, Acreage, and Comparative Ratings of Active Field Plantings in _____	40
Exhibit "I" - Collection, Production and Distribution Data for the Pleasanton Plant Materials Center for the Fiscal Year 19__	41
Exhibit "J" - Consolidated Seed and Plant Request.	42
Exhibit "K" - Seed and Stock Encumbrance Register.	43
Exhibit "L" - Distribution and Delivery Record	44

POLICY AND PROCEDURES FOR CONDUCTING PLANT MATERIALS ACTIVITIES IN CALIFORNIA

Service Policies and Functions in Plant Materials are set forth in PLANT MATERIALS MEMORANDUM SCS-1 (Revised) April 26, 1963. California Policies and Procedures within the frame-work of this memorandum follow.

SECTION I

FUNCTIONS

GENERAL

The Soil Conservation Service operates the Pleasanton Plant Materials Center and its Field Evaluation Plantings for the purpose of developing improved plants, cultural techniques and management methods for use in the administration of the conservation program in California. The State Conservationist is responsible for the operation of the Pleasanton Plant Materials Center. Technical guidance and leadership are provided by the Field Plant Materials Technician, headquartered at the Center, and the Washington-Field Plant Materials Technician (West). Coordination of Technical activities with those of other Centers in the Western States is handled by the Washington-Field Plant Materials Technician (West). Center activities are cooperative with state, federal and private agencies. These agencies include the California Division of Soil Conservation of the Department of Conservation which, under a special agreement, provides funds for use in the operation of the Center; the California Department of Fish and Game; the University of California Agricultural Experiment Station; the U. S. Forest Service; the Agricultural Research Service; the Carnegie Institution of Washington, and others.

THE PLEASANTON PLANT MATERIALS CENTER

Within the limits prescribed in Approved Projects, and in accordance with the Long-Range Plant Materials Program for California and adjacent Nevada, the Pleasanton Plant Materials Center plans and carries out a systematic conservation plant improvement program following the steps outlined in Exhibit "A", Page 33. The Manager of the Center is responsible for:

1. Developing programs for Plant Materials Center operations in cooperation with the Field and Washington-Field (West) Plant Materials Technicians. These programs will be submitted to the State Conservationist for approval. They will be cleared through channels with the California and Nevada Agricultural Experiment Stations.
2. Preparing annual work plans based on the approved programs and submitting them to the State Conservationist for concurrence. Copies will be sent to the Washington-Field Plant Materials Technician (West).
3. Determining needs for PMC operations based on approved programs and work plans and presenting these needs to the State Conservationist.
4. Carrying out operations required by approved programs and plans with the personnel, funds and facilities provided.
5. Developing performance standards and requirements and establishing checks and controls for PMC operations to see that high levels of technical excellence and production are maintained.
6. Providing opportunity for personnel training and advancement.

7. Maintaining cooperative relationships.
8. Analyzing and reporting accomplishments.
9. The PMC Manager is also responsible for carrying out the functions prescribed in Section II.

FUNCTIONS OF THE FIELD PLANT MATERIALS TECHNICIAN

The Field Plant Materials Technician serves California and the Soil Conservation Districts in Nevada, which are administered from California. He is headquartered at and provides technical guidance and leadership to the Pleasanton Plant Materials Center. He reports to the California State Conservationist and represents him in plant materials activities in the State.

In carrying out his functions he:

1. With other members of the State Program Staff works with other plant technologists, vegetative specialists, and field personnel of the Service to determine plant materials needs.
2. Assists the State Conservationist in the development of the Long-Range Plant Materials Program for California and parts of adjacent Nevada.
3. Consults with research agencies, particularly the California Agricultural Experiment Station, regarding plant materials needs.
4. Develops with the Manager of the Pleasanton Plant Materials Center programs for PMC operations, including the systematic testing and development of improved plants, culture and management. Correlates these programs with the Washington-Field plant technologists and inter-area vegetative specialists concerned, and with the California and Nevada Agricultural Experiment Stations.

5. Is responsible for the development of an annual work plan for Field Plantings and Seed Increase Plantings, based on the approved long-range program for these activities. This work plan has the concurrence of the Soil Conservationist on the California State Program Staff and of the Washington-Field Plant Materials Technician (West).
6. Carries out the provisions of the Annual Work Plan for Field Plantings and Seed Increase Plantings with the assistance of the technical staff of the Pleasanton Plant Materials Center.
7. Assists growers in Soil Conservation Districts with the production of new plant materials.
8. Prepares, with the assistance of the Washington-Field PMT and the PMC Manager, performance summaries on proven new species and varieties. Submits summaries to the California Agricultural Experiment Station, and requests certification of superior conservation plants by the California Crop Improvement Association and release for commercial use.
9. Prepares an annual report of crop-year results with Field Plantings and District Seed Increase Plantings. This report is included as a part of the Plant Materials Center Annual Operations report.
10. Maintains a list of commercial sources of seed and plants needed in conservation work in California and adjacent Nevada. This includes preparing, annually in September, an Advisory Notice to all California offices which lists by growers the species and variety, and the amounts and class of seed produced in District Seed Increase Plantings.

11. Assists line officers in conducting Plant Materials training programs and Technical Workshops for field personnel.
12. Maintains cooperative relationships with appropriate State, Federal and private research agencies, California Seed Association, individual seed companies, fertilizer companies, State and County regulatory services and others in obtaining, testing, and producing plant materials.
13. Prepares technical releases for field personnel and technical papers and articles for magazines and professional journals.

FUNCTIONS OF THE WASHINGTON-FIELD PLANT MATERIALS TECHNICIAN

1. Provides technical guidance to the Field Plant Materials Technician.
2. Assists the State Conservationist in planning the Plant Materials Program for the State and for the Plant Materials Center.
3. Provides technical coordination of all Plant Materials activities in the Western States.
4. Keeps currently informed on the development of new materials and cultural methods and recommends their use in soil and water conservation programs.
5. Coordinates the Western States allocation and distribution of Plant Materials produced by PMC's or obtained by inter-regional exchange.
6. Correlates plant materials work with other Plant Technology Specialists and Engineering and Watershed Planning Unit Specialists.

7. With the Field PMT and PMC Manager, prepares for publication material, regional or general in scope.
8. Collaborates with the State Conservationist in maintaining cooperative relationships with the California Agricultural Experiment Station and other agencies involved in the plant materials program.
9. Assists in the training of Field Plant Materials Technicians and Plant Materials Center Managers and technicians.
10. Represents the Service on committees dealing with introduction, testing, and production of plant materials.

POLICY AND PROCEDURES FOR CONDUCTING PLANT
MATERIALS ACTIVITIES IN CALIFORNIA

SECTION II

OBSERVATIONAL ACTIVITIES AND REPORTING

GENERAL

Observational studies at the Pleasanton Plant Materials Center, at its Field Evaluation Plantings, and in Field Plantings in Soil Conservation Districts, are designed to make available the best possible plants, culture and management for soil, water and plant conservation. The time-tested process by which improved plant materials are developed is diagrammatically shown in Exhibit "A", Page 33. This systematic process involves a step by step testing program in which plant materials from all over the world are comparatively evaluated. Range of adaptation and specific soil requirements are determined, and cultural techniques and management methods established for the proven superior new conservation plants before they are certified and released for standard use and recommended in Work Unit Technical guides. These activities are closely integrated with field practices and handled in collaboration with other Federal and State agencies. The work is done in cooperation with the California Agricultural Experiment Station, the California Division of Soil Conservation, the California Department of Fish and Game, the Agricultural Research Service, the U. S. Forest Service, and the Carnegie Institution of Washington.

PROJECT METHODS AND PROCEDURES

Observational studies at the Pleasanton Plant Materials Center are conducted by the project method and procedure. Approved Projects on file at the Plant Materials Center and listed in Exhibit "B", Page 34, have been approved for all phases of Plant Materials work. Technical assistance is given by the Washington-Field Plant Materials Technician (West) and the California Plant Materials Technician. The Washington-Field PMT will review new phases of existing projects with other Washington-Field Plant Technologists (West).

INITIAL STUDIES

Initial observational studies include all preliminary comparative evaluations of adaptation, culture, and use of conservation materials at the PMC and at its Field Evaluation Plantings. The studies are conducted by the "use group" method.

SUPPLEMENTAL STUDIES AND FIELD EVALUATION PLANTINGS

Supplemental observational studies include secondary evaluations on adaptation, culture, and use of materials selected from the initial observation tests. Supplementary studies may be carried on by the Pleasanton Plant Materials Center or they may be elsewhere in the territory served by the Center. The off-Center secondary studies are known as Field Evaluation Plantings.

Field Evaluation Plantings will be established only after (1) adequate determination of need, (2) a formal proposal made thru channels by the Area Conservationist, (3) feasibility determined, (4) work plan prepared, and (5) approval by the State Conservationist.

FACILITATING STUDIES

Facilitating studies are designed to improve techniques, increase efficiency, and reduce the cost of operations as related directly to the production of plant materials. They apply especially to promising new species but may concern plants already in general use. This type of study may include tests pertaining to seed collection, propagation, storage, cultural practices, or any other essential investigation covering the complete range of plant production.

SPECIAL STUDIES

Special observational studies provide the basis for projecting activities of a definite research nature which result from cooperative understandings with Federal and State research agencies. However, such investigations must contribute directly to the conservation program, and the research agency concerned must assume responsibility for the research phases of the work.

ANNUAL WORK PLANS FOR OBSERVATIONAL STUDIES

Annual work plans for each active observational project will be completed and submitted in two copies by the Manager of the Pleasanton Plant Materials Center to the California PMT and to the Washington-Field PMT for correlation and technical approval prior to any work. One signed copy will be returned to the Center. A complete planting list is an essential element of these plans.

Five copies of the portion of the Annual Work Plan for Project RN-1, which deals with the Cooperative Waterfowl Food Plant and Upland Game Plant testing, will be prepared. This portion of the Work Plan will be reviewed by the Washington-Field Plant Materials Technician, Field Plant Materials Technician and the California Department of Fish and Game. Signed copies will be distributed to the California SCS State Office, the California Division of Fish and Game, and the Washington-Field Plant Materials Technician. The fifth copy is for the Pleasanton Plant Materials Center.

INITIAL PLANT MATERIALS INCREASE

The Pleasanton Plant Materials Center will increase promising accessions from initial tests for secondary studies. The Manager of the Center will prepare plans for initial seed increase. These plans will be part of the seed production schedule. Packets of seed of each accession in initial increase will be provided (together with brief descriptions) to each of the other Plant Materials Centers in the Western States to obtain uniform adaptation test information. Each Center will report annually on results obtained.

FIELD PLANTINGS IN SOIL CONSERVATION DISTRICTS

Policy. Field Plantings will be made on farms in soil conservation districts as final tests and demonstrations of promising developments of cooperative work of the Plant Materials Center.

New species, strains, or cultural methods will be scheduled for Field Plantings only after evidence is available that they are superior to the standards referenced in the current technical guides. Field Plantings will be programmed, planned, and reported on by the Field Plant Materials Technician and the Pleasanton Plant Materials Center staff. For the purpose of evaluation, a follow-up and control record of plantings will be maintained by the Field PMT. Periodic inspections and reports on these plantings will be made. Special attention will be given to determining specific soil-plant correlation in these final tests. New species or strains will not be released for general use (recommended in technical guides) until such release has been officially cleared.

Procedure.

1. Program. A long range program for Field Plantings will be developed by the Plant Materials Technician and the Manager of the Plant Materials Center. It will be submitted to the State Conservationist and the Washington-Field Plant Materials Technician for approval. It will be cleared with official cooperators. The program will describe the kinds of plantings that will be put on farms in soil conservation districts to compare new plants or practices with those in the technical guides. If changes in the program are needed, the PMT will submit amendments.
2. Annual Work Plan. The Plant Materials Technician, with assistance of the Plant Materials Center staff, will develop an annual work plan based on the approved program. It may be modified by the response to the Advisory Notice to Area Conservationists and Vegetative Specialists requesting suggestions for plant materials testing. The annual work plan will provide information on:
 - a. The new species, strains or cultural practices being featured.
 - b. The standard species, strain or practice (referenced in the Technical Guide) used for comparison.
 - c. Districts in which Field Plantings are scheduled.
 - d. Minimum cultural practices.Annual work plans will be submitted to the Washington-Field Plant Materials Technician (West) and Soil Conservationist on the California Program Staff for concurrence by September 15 each year. An estimate of the planting materials needed will be included as a part of the Consolidated Seed Request.

3. Operations. A planting plan for each Field Planting will be prepared by the Work Unit Conservationist and/or inter-area vegetative specialist or jointly with the Plant Materials Technician. Planting plans will be developed in three copies on Form CF-31 - Revised 8/1/62, (see Exhibit "C", Page 35). They will be developed with the cooperator. Signed plans will be submitted thru the Area Conservationist to the Field Plant Materials Technician. Two approved copies will be returned--one to the Area Conservationist and the other to the Work Unit Conservationist. Approval of the planting plan will encumber the seed or plants of the featured species to be furnished by the Plant Materials Center for the Planting.
4. Reporting Results. The Field Plant Materials Technician will keep a current record on each active Field Planting. Information on new Plantings will be recorded on Form CF-73, (Exhibit "D", Page 36). prior to seeding, at time of seeding, and at 30 and 90-day intervals after planting. Within 120 days after planting, the Work Unit Conservationist and/or Field Vegetative Specialist will submit one copy of the completed Form CF-73, thru the Area Conservationist, to the Field PMT. Performance Information will be accumulated and filed by Planting for reference and interpretation. Every Planting will be examined at least once a year and rated comparatively on "Report of Field Planting", Form CF-23, (Exhibit "E", Page 37). In addition, summary reports will be prepared in memoranda form by areas on all active Plantings in the area. Copies will be sent to the State Office, Washington-Field PMT (West), inter-area Vegetative Specialist concerned, and to the Work Unit Conservationists involved.

SEED INCREASE PLANTINGS IN SOIL CONSERVATION DISTRICTS

Policy. The Soil Conservation Service cooperates with the California Agricultural Experiment Stations and with other State and Federal Agencies in developing plant materials suitable for conservation plantings. Increases of these materials are made in Soil Conservation Districts from Foundation or Foundation quality propagule materials provided by the Pleasanton Plant Materials Center on the basis of approved planting plans.

1. Responsibilities of District Directors:

- a. Approve district seed producers on the basis of their abilities, facilities, and interest in producing high quality seed or plants. The selection of district producers and amount of seed or plants assigned to each should be determined on the basis of conservation needs and the amount of planting materials available.
- b. Furnish the planting materials provided by the Soil Conservation Service to approved growers.
- c. Have an agreement or understanding with the producer. This may be a part of his Conservation Plan or it may be in the form of an exchange of letters, or it may be verbal. The following items should be considered:
 - (1) When, how, and where seed is to be cleaned and processed.
 - (2) Period covered by the agreement (i.e., the agreement may continue in force during the productive life of the original planting but not to exceed 5 years).
- d. Understand that all risks in production must be assumed by the producer.

2. Responsibilities of the Soil Conservation Service:

- a. Give technical assistance in all phases of District Seed Increase. Growers will be encouraged to become members of the Crop Improvement Association and to produce certified seed.
- b. Correlate Seed Increase plans with the California Crop Improvement Association and the California Agricultural Experiment Station to help prevent duplication in distribution of foundation seed. The Plant Materials Technician will be responsible for this correlation.
- c. Prepare an Advisory Notice by October each year summarizing by growers and districts, species and amounts, the annual production of seed and/or plants produced under the District Seed Increase program. Copies will be sent to all California offices, Nevada State Office, Washington-Field PMT, California and Nevada Agricultural Experiment Stations and California Crop Improvement Association.

3. Limitations:

- a. In the case of small seeds, (such as Hardinggrass) the maximum amount furnished to a grower will be 100 pounds or enough to seed 10 acres, whichever is greater. In the case of large sized seeds, (such as LANA vetch) the limitation will be 200 pounds or enough for 10 acres. For vegetative materials the amount furnished will not exceed that needed for one acre. Exceptional cases must have clearance from the State Conservationist.

- b. A ~~maximum~~ of two species for each grower may be allocated to a Soil Conservation District (providing technical requirements, including isolation, can be met). Exceptional cases must have clearance from the State Conservationist.
- c. Foundation seed of the same perennial species will be furnished to a Soil Conservation District for use by the same grower for not more than 2 successive years.

Procedure.

1. Program. A long-range program for District Seed Increase will be developed by the Field Plant Materials Technician for the area he serves. The program will be for a 5-year period but may be amended. It will be approved by the State Conservationist. The Plant Materials Technician will correlate the program with the California Agricultural Experiment Station. The program will state the kinds of materials to be increased and indicate how they should be handled.
2. Annual Work Plan. The Plant Materials Technician, with the Manager of the Pleasanton Plant Materials Center, will develop annual work plans based on the approved program. Each work plan will list the species, accessions scheduled for increase and locations of proposed Plantings by districts. The work plan will be prepared as of September 15 of each year, and submitted to the Washington-Field PMT and Soil Conservationist on the California State Program Staff for concurrence.

3. Instructions for developing planting plans. A planting plan for each Seed Increase Planting will be prepared with the Cooperator by the Work Unit Conservationist or inter-area Vegetative Specialist on Form CF-32 "Plan for Seed Increase Planting", (Exhibit "F", Page 38).

Clearance by the district governing body assumes that the policy discussed under 1 - -, Page 13, has been adequately reviewed and that the proposed planting is in accordance with it. The Grower, by his signature on Form CF-32, accepts the fact that the Soil Conservation Service assumes no responsibility for risks in production or marketing.

Three copies of the approved plan will be submitted thru the Area Conservationist to the Plant Materials Technician for approval. Two copies will be returned; one to the Work Unit and the other to the Area Conservationist. The completed and approved forms encumber planting materials to be furnished by the Center. The Work Unit Conservationist will notify the Manager of the Plant Materials Center when the seed is needed.

4. Reporting results. The Plant Materials Technician will maintain records on each active Planting. Information will be recorded and filed by Plantings. Preliminary information on new seedlings will be obtained by the responsible District Technician just prior to plantings, at the time of seeding, and at 30 and 90-day intervals after seeding. This information will be recorded on Form CF-73, (Exhibit "D", Page 36), one copy of which will be submitted thru the Area Conservationist to the Plant Materials Technician within 120 days after the Planting is made.

5. Correlation with experiment stations and other bureaus. The Plant Materials Technicians will obtain yield information from the Seed Increase fields and prepare a summary to be included in the Annual Operations Report. The summary information will also be provided to the California and Nevada Agricultural Experiment Stations and Crop Improvement Associations during the Annual Inter-agency Work Planning Conferences.

REPORTING OBSERVATIONAL STUDIES

Reports of observational work will be prepared according to instructions given in the section of "Annual Technical Reports". Manuscripts for publication will be cleared with official cooperators and referred to the Washington-Field PMT for technical approval and to the State Conservationist for clearance.

1. Annual Technical Reports.

- a. General. Annual Technical Reports will be made by the Manager of the Pleasanton Plant Materials Center and his staff on each active observational project. An Annual Weather Summary will be included. These reports will be on a crop-year basis-- October 1 of one year thru September 30 of the next. Each report will contain three sections, as follows:

- (1) Text. The text is especially for the use of the technician in charge of the project and his immediate superiors. It should be brief and include only the charts, figures, photographs, and summary tables needed to simplify the narrative.

The purpose of the text is to:

- (a) Record the influence of season, culture, and management upon the results.
- (b) Provide continuity between present and past work.
- (c) Record any important changes in methods.
- (d) Provide a reference to tables and charts in the appendix.
- (e) Give tentative interpretations to results.
- (f) Guide the future work of the project.

The text is to be indexed with a table of contents.

- (2) Appendix. All basic and summary data not needed for an immediate understanding of the text should be placed in the appendix. This material is for the use of the technician in charge of the project and his immediate superiors. It should be processed to facilitate later use in preparing publications and finished reports. The appendix is to be indexed with a table of contents.

- (3) Abstract. This is to give cooperators and administrators a brief summary of the work, progress being made, and its conservation objectives. Tentative interpretations of results and their possible application may be included.

- b. Date due. Annual Technical Reports are due in the offices of the State Conservationist and the Washington-Field Plant Materials Technician by April 1 each year.

- c. Copies required and distribution. Five complete copies of the Annual Technical Report and four additional copies, containing abstracts only, will be prepared. One of the complete copies and one, without appendix tables, will be sent to the Washington-Field Plant Materials Technician (West); one complete copy is for the California Plant Materials Technician; and one copy, without appendix tables, is for the State Conservationist to transmit to the Chief of the State Division of Soil Conservation. The fifth copy will be retained as the PMC file copy. The Washington-Field PMT (West) will, upon request, route the copy of the report, without appendix tables, to other Field Plant Materials Technicians in the Western States.

One copy of the abstracts only will be sent to the Washington-Field PMT (West) and two to the State Conservationist. The fourth copy will be retained at the Center as a file copy. The Washington-Field PMT will be responsible for routing one copy of the abstracts only to the SCS Washington, D.C. office. The State Conservationist will retain one copy and transmit the other copy of abstracts only to the Director of the California Agricultural Experiment Station. Four copies of the portion of the Annual Technical Report, which deal with the Cooperative Waterfowl and the Upland Game Plant testing, will be prepared for the California Department of Fish and Game.

2. Annual Operations Reports

- a. General. An Annual Operations Report will be made by the PMC Manager at the close of each fiscal year and submitted to the State Conservationist by August 15. A copy will be sent to the Washington-Field PMT (West) for use in his report to the Washington office. This report is for the purpose of summarizing accomplishments and for the accumulation of standard information. One copy, together with a Program of Work for the succeeding year, is to be provided to the State Division of Soil Conservation for use in budget preparation.
- b. Outline. The Annual Operations Report will be prepared according to the following outline:
 - (1) Introduction. The chronology of the report with respect to previous ones should be included.
 - (2) Personnel. List permanent personnel employed during the year, showing: position number, name of incumbent, grade, position title, period employed (if less than full time), and any important changes during the year.
 - (3) Labor. Indicate the type of labor used and the total man-hours employed during the year.
 - (4) Land. Show this information in tabular form, see Exhibit "G" (Page 39).

- (5) Funds. Indicate total amount used during the year, showing appropriation or source. Funds obtained by reimbursement are to be included.
- (6) Reports on Field Plantings and Seed Increase Plantings. These will be obtained from the Plant Materials Technician. Both narrative summaries by species and tabular data, see Exhibit "H", (Page 40) are to be included.
- (7) Collection, production, and distribution data. Follow the format shown in Exhibit "I" (Page 41).
- (8) Noteworthy accomplishment of the year. Prepare a brief narrative--one page or less (single spaced)--on each of the two or three most noteworthy accomplishments of the Pleasanton Center during the year. These must be written so that they can be used without editing by the Washington-Field Plant Materials Technician (West) in his consolidated report to the SCS Washington office.

- (9) Publications. Tabulate the important publications released by the Pleasanton Plant Materials Center during the year. Include: Technical Notes; USDA leaflets; program aids or other types of publications; technical journal articles; California Experiment Station or Extension Service publications; mimeographed or otherwise duplicated material for handouts or releases.

POLICY AND PROCEDURES FOR CONDUCTING PLANT
MATERIALS ACTIVITIES IN CALIFORNIA

SECTION III

PRODUCTION, COLLECTION AND DISTRIBUTION OF PLANTING MATERIALS

QUOTAS AND REQUESTS

Quotas for production and collection will be arrived at thru the development of the Seed Production Schedule. Quotas will be based on approved requests:

1. For Field Plantings and District Seed Increase.
2. For special materials for specific and justified uses, such as requirements of Engineering and Watershed Planning Units.
3. From official cooperators arranged thru cooperative agreements developed by the State Conservationist with:
 - a. California Department of Fish and Game
 - b. California Division of Forestry
 - c. California Agricultural Experiment Station, i.e., foundation seed.
4. From other Federal agencies thru special arrangement provided by the Washington-Field Plant Materials Technician (West) and the State Conservationist:
 - a. Agricultural Research Service
 - b. Forest Service
 - c. U. S. Armed Forces - Army, Navy, etc.
 - d. Bureau of Reclamation.
5. From the Manager of the Pleasanton Plant Materials Center on the basis of formal work plans for:
 - a. Seed and stock production by the Plant Materials Center.
 - b. Field Evaluation Plantings or other uses.

ACCESSION RECORDS AND OBTAINING "P" NUMBERS

All incoming lots of seed, plants and clones will be posted to the Seed Received Record Book with source and amount, and previous number or numbers. All lots will be given a P1 number, beginning with #1 and followed by the last 2 digits of the year received each calendar year.

When lots, which are not received with a "P" number, reach the initial increase stage of testing, such numbers will be requested. Requests are made by submitting one copy of source information on Form SCS-582 (revised 3/7/61) together with a small sample of seed in a 2½" x 4½" size manila packet to the Washington-Field PMT (West). Show scientific name, previous number and source on the packet. The Washington-Field PMT will assign a "P" number to the lot and by memoranda inform the Center of the number assigned.

CONSOLIDATED SEED AND PLANTING MATERIALS REQUESTS

Requests for seed and plant materials needed by the Pleasanton Plant Materials Center for all its activities and including that for cooperators, will be prepared in a preliminary form as of January 15, each year. This request will show estimated needs for the following crop-year. This preliminary request will be revised and submitted to the Washington-Field PMT (West) on or before August 1, as the Consolidated Seed Request, (see Exhibit "J", Page 42). From it, allocations will be made during the Annual Allocation and Work Planning Conference held the third full week in August each year.

PLANS FOR PRODUCTION AND COLLECTION

The Manager of the Pleasanton Plant Materials Center will develop yearly production and collection plans. Production plans will be made concurrently with the development of quotas. They will be submitted to the Washington-Field PMT (West) by October 1 each year for concurrence prior to the time of planting. Plans for both seed and stock production will take the form of a rotation schedule showing the anticipated production by accession, by years, and by field, for a rotation period or more. A summary will be included showing the anticipated production by accession by season. Collection plans will include a simple list of the accessions to be collected, with remarks as to when, where, and by whom the collections are to be made.

RECORDS OF QUOTAS, REQUESTS, INVENTORIES,
ALLOCATIONS AND SHIPMENTS

The Manager of the Pleasanton Plant Materials Center will keep Seed and Stock Encumbrance Registers (see Form CF-22, Exhibit "K", Page 43), by crop-years. These will be kept by lot number and accession number on all materials subject to allocation.

PLANTING MATERIALS INVENTORIES

Seed and plants are either property and subject to accountability or observational lots (not on inventory) subject to technical control.

Acceptable methods of accounting are required of the Manager of the Pleasanton Plant Materials Center. Seed and Stock Encumbrance Registers (Form CF-22) will be used for this purpose. Small lots of seed or planting stock obtained for testing are not classified as property, but a record of these observational lots will be maintained.

SEED INVENTORIES

The Manager of the Pleasanton Plant Materials Center will make a physical inventory of seed on hand as of July 1 each year. This inventory will include only that kind classed as property. It will show such items as species, accession number, year of harvest, source, lot number, purity, latest germination with date of test, class of seed, and the amount on hand. One copy of the inventory will be sent to the Washington-Field PMT (West) by August 1 each year. Items subject to allocation will be posted from the inventory to appropriate Seed and Stock Encumbrance Registers.

SHIPMENT OF PLANTING MATERIALS

The Manager of the Pleasanton Plant Materials Center will make shipping arrangements. Shipping costs for materials for in-Service use are to be charged to the Center's appropriation unless otherwise arranged. The Manager will currently post all shipments of materials to the appropriate Seed and Stock Encumbrance Registers. Distribution and Delivery Record (Form SCS-596, Exhibit "L", Page 44) will be used to document all shipments of consequence. Pinto Tags to meet inter-County quarantine regulations will be used on shipments of all authorized species. They are not to be used on out of State shipments or on unauthorized species. The yellow "Hold for Inspection" tags will be used in these instances.

REIMBURSEMENT FOR PLANT MATERIALS FURNISHED

1. Authority. Specific arrangements must be completed in advance before planting materials can be furnished to other agencies on a reimbursable basis. These arrangements are made by the California State Office, and any matters pertaining thereto must be transmitted to the State Office for resolution.

2. Releasing planting stock on a reimbursement basis. Distribution and Delivery Record, Form SCS-596, is used for releasing stock on a reimbursable basis. The Manager will be responsible for initiating reimbursement actions. Funds received will, unless otherwise arranged for, be credited to the Pleasanton Plant Materials Center. Whenever a consignment of seed or stock is made on a reimbursable basis, the duplicate, triplicate and quadruplicate copies of Form SCS-596 will be stamped "For Collection". The Manager will include information on the green, duplicate copy of Form SCS-596 (or appended to it) so that the State Office may proceed at once with the collection. The following information is needed:
- a. Reference to the authority for releasing the planting material. This may be a Memorandum of Understanding, Cooperative Agreement, or some other authoritative document.
 - b. The unit and total cost of each item for which reimbursement is claimed.
 - c. Any instructions applicable, such as the appropriation to be credited.

DISTRIBUTION RECORDS OF SEED AND PLANTS

1. General information about seed and plant distribution. Seed and plants are either: (a) property, in which case they are subject to accountability similar to that for other types of expendable property, or (b) valuable observational or research materials, in which case they are subject to definite technical controls. In either case all distribution of plant materials must be accompanied by a properly executed Distribution and Deliver Record, Form SCS-596.
2. Routing of Distribution and Delivery Records. Routing will be in accordance with instructions on the SCS-596 Form.
3. Instructions for preparing Distribution and Delivery Records.
 - a. Order No. The Pleasanton Plant Materials Center maintains its own continuous order number series and controls.
 - b. Date. The date called for in the upper righthand corner of the form is the date the form is made up.
 - c. Delivered to. This is self-explanatory. Complete information should be given.
 - d. Ordered by and date. Show here the name of the individual requesting the shipment, with the date of the request.
 - e. Shipped to. Give complete address of Consignee if it is different from that shown under "c" above.
 - f. Shipped from. This is the Pleasanton Plant Materials Center unless shipment is made from some other point.
 - g. Date shipped. Insert the actual date shipment is made.

- h. Method of shipment. Indicate method of shipment in the appropriate box.
- i. Accession No. Accession numbers or lot numbers are to be shown only when materials are released for investigational purposes to official cooperators, or for increase purposes, such as District Seed Production, Center increase, etc. Accession numbers need not be shown for materials released for Field Plantings, operations work of other bureaus or agencies, or educational and demonstrational nurseries. Show original source information on packet lots for observational purposes, but not on Form SCS-596.
- j. Species. Always give the scientific name. Varietal common names should be given when available.
- k. How packed. This is self-explanatory.
- l. Seed (pounds) and plants (number). Weights will be shown in decimals rather than fractions. When packets are shipped, use the word "pkt".
- m. Storage facility from which delivered.
- n. Order prepared by. Show the name of the Center employee who prepares delivery instructions for the person who actually fills the order.
- o. Filled by. Show the person's name who is actually in charge of filling the order--the Seed Warehouseman or Farm Superintendent.

- p. Checked by. The Center Manager may delegate the responsibility for checking orders or do it himself, but the name of the individual who actually checks the order must be shown in this space. All seed, especially that for testing and for research agencies, must be checked by a competent technician.
- q. Received by. A signature with title should be obtained for every delivery of planting materials. This must be shown on the blue, quadruplicate copy in all cases, and on the green or duplicate copy whenever reimbursement is claimed. It is not mandatory that other copies be manually signed.
- r. Approved by. All copies must be manually signed by the Center Manager or whomever he delegates.

APPENDIX

THE USDA - SCS PROCESS BY WHICH IMPROVED PLANT MATERIALS
ARE COOPERATIVELY DEVELOPED AND USED IN THE CONSERVATION PROGRAM

33,

Exhibit "A"

ASSEMBLE MATERIALS & SEGREGATE INTO USE GROUPS

COLLECTIONS FROM NATIVE VEGETATION - FOREIGN PLANT INTRODUCTIONS
STRAINS FROM PLANT BREEDERS - COMMERCIAL SEEDS

INITIAL SCREENING AT PLANT MATERIALS CENTER

COMPARATIVE GERMINATION & SEEDLING VIGOR -
RESISTANCE TO DISEASE, INSECTS, COLO & DROUGHT - RESPONSE TO ACID OR ALKALI SOILS -
SEEDING HABITS & SEED AND FORAGE PRODUCTION - SEASON OF USE FOR RANGE OR PASTURE -
PROBABLE CONSERVATION USES & VALUE FOR WATERFOWL FOOD

INITIAL SEED INCREASE

SECONDARY TESTING IN FIELD EVALUATION PLANTINGS IN CONSERVATION PROBLEM AREAS
in comparison with standards

MIXTURE TRIALS

COMPATIBILITY IN
MIXTURES -
FERTILITY LEVEL
REQUIREMENTS

CULTURAL TRIALS

SEEDING METHODS -
RATE & DATE OF SEEDING -
FERTILIZER RESPONSE
STAND ESTABLISHMENT

MANAGEMENT TRIALS

GROWTH CURVE STUDIES -
SIMULATED GRAZING STUDIES

CONSERVATION USE TRIALS

ADAPTATION STUDIES -
ROOT PRODUCTION -
VALUE FOR WATERWAYS,
SOIL IMPROVEMENT,
RANGE & WILDLIFE

LARGER SCALE SEED INCREASE & SEED PRODUCTION STUDIES

RATE OF SEEDING - ROW SPACING - SELECTIVE WEED SPRAYS -
TIME & METHODS OF HARVESTING AND PROCESSING -
IRRIGATION AND FERTILIZATION STUDIES

FINAL TESTING IN FIELD PLANTINGS ON FARMS IN SOIL CONSERVATION DISTRICTS

COMPARATIVE EVALUATION ON ERODED SITES, ON WATERWAYS,
IN SOIL CONSERVING ROTATIONS, FOR RANGE & PASTURE USES,
FOR WATERSHED PROTECTION, AND FOR WILDLIFE & WATERFOWL FOOD AND COVER -
FINAL CHECK ON ADAPTATION AND CULTURE -
FINAL CORRELATION WITH SOIL MAPPING SYMBOLS

RELEASE OF SPECIES OR STRAINS
WITH
EXPERIMENT STATION OR OTHER AGENCY

PRODUCTION OF FOUNDATION SEED STOCKS

PRODUCTION OF CERTIFIED SEED BY FARMERS

In District Seed Increase Plantings

STANDARD USE

PRECISE RECOMMENDATIONS BY SPECIES & VARIETY,
RATE OF SEEDING, CULTURAL TECHNIQUES,
& MANAGEMENT REQUIREMENTS BY CLIMATIC ZONES FOR SPECIFIC SOILS AS
INDICATED BY MAPPING SYMBOLS & LAND CAPABILITY UNITS

TECHNICAL GUIDES

Time required for complete testing of superior accessions - ten to fifteen years or more.

APPROVED PROJECTS
PLEASANTON PLANT MATERIALS CENTER

- PROJECT RN-1 - Observational testing of native and introduced grasses, legumes and forbs for use in soil and moisture conservation. Approved 1937.
- PROJECT RN-2 - Seed increase and production trials of grasses and legumes. Approved 1937.
- PROJECT RN-3 - Mixture Trials - Approved 1937.
- PROJECT RN-4 - Cultural Trials - Approved 1937.
- PROJECT RN-5 - Date and rate of seeding trials - Approved 1939.
- PROJECT RN-6 - Influence of previous crop and methods of tillage on establishment - Approved 1939.
- PROJECT RN-7 - Relation between method of seeding and the establishment of typical native grasses - Approved 1937.
- PROJECT RN-8 - Observational testing of native and introduced trees and shrubs for use in soil and moisture conservation - Approved 1937.
- PROJECT RN-9 - Observational plantings of Woodlots, Snowbreaks and Windbreaks - Approved 1937.
- PROJECT RN-10 - Storage of nursery stock under controlled conditions of low temperature and good optimum humidity - Approved 1937.
- PROJECT RN-17 - Outlying Nurseries (Field Evaluation Plantings)- Approved 1936.
Sunol Field Evaluation Planting
Butte Valley Field Evaluation Planting
Temecula Field Evaluation Planting
King City Field Evaluation Planting
Gray Lodge Field Evaluation Planting
- PROJECT RN-18 - Seed Storage Studies - Approved 1936.
- PROJECT RN-200 - Initial Seed Increase - Approved 1937.
- PROJECT SP-1 - Seed and Plant Collection - Approved 1936.
- PROJECT SP-3 - Seed Germination and Longevity - Approved 1938.

U. S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

35.
Exhibit "C"

Trial No. _____

PLANTING PLAN FOR FIELD PLANTINGS

Species, strain, or practice featured _____

Acc. No. P- _____

Soil Conservation District _____
(Name) (Number)

Cooperator _____
(Name) (Address)

Agreement No. _____ Field No. _____ Acres _____

Trial Practice:

Species	lps Acre Rate	Total Needed (Gross)	Supplied by
---------	------------------	-------------------------	----------------

Site: Soil Series and/or Mapping Symbol _____ Cap. Unit _____ Irrigation _____
(Yes or No)

Slope _____ Exposure _____ Precipitation __ in. Elevation ____ ft.

Field history for past 3 years: 19 __, _____
19 __, _____
19 __, _____

Seedbed condition: _____

Method of planting: _____ Date to be planted: _____

Comments (on a standard planting for comparison)
Description: _____

Location: _____

Age: _____

Cooperator: _____ Date _____
(Signature)

Submitted by _____ Date _____

Approved by _____ Date _____
(Area Conservationist)

_____ Date _____
(Plant Materials Technician)

COMPLETE CHECKLIST ON REVERSE SIDE

CHECKLIST FOR PROPOSED FIELD PLANTINGS

(To be completed when planting plan form is prepared)

1. Does the Cooperator understand the purpose of the planting or practice, as well as the culture and management required for its success? _____
(Yes or No)
2. Does the site meet the requirements stipulated in the Work Plan? _____
 - a. Is it conveniently located? _____
 - b. Is it representative of a benchmark soil? _____
 - c. If it is to be grazed, is the field a separately fenced unit of adequate size? _____
3. Is a standard planting or practice provided? _____
4. Are planned weed control measures adequate? _____
5. Will the field and equipment be checked prior to planting? _____
6. If on cultivated land, will the alternate row technique be used? _____
7. Will an SCS technician help with the planting? _____
8. Will followup assistance be provided:
 - a. to secure adequate weed control? _____
 - b. to obtain performance records, such as forage yields, animal gains, value of plant or practice for erosion control, runoff reduction and soil improvement? _____
9. Comments -- explanations, if ^{no} answers:

(Signature and Title)

(Date)

PRELIMINARY INFORMATION ON NEW FIELD PLANTINGS

Trial No.
Species
Cooperator
District

1. CHECK PROPOSED FIELD A WEEK OR TEN DAYS BEFORE SEEDING.
What was preparatory treatment? Sudan Fallow Other
Was time of 1st cultivation before annuals produced seed? After
Condition of seedbed this date. Excellent Good Fair Poor
Soil moisture. Adequate Too dry Too wet
Weed infestation. None Light Heavy %Broadleaf %Grasses
SHOULD THIS PLANTING BE MADE AT THIS TIME? Yes No
2. STATUS AT TIME OF SEEDING. Date Seeded
Seedbed condition. Satisfactory Unsatisfactory Depth of seeding
Method of planting. Drilled Broadcast Other
Mixture if other than listed
Rates per acre if other than listed
Seed dilution used. Yes No Kind
Inoculation. Yes No Seed treatment. Yes No Kind
Record anything unusual or pertinent

Your appraisal of seedbed, seeding methods, and possible results
3. RESULTS 30 DAYS AFTER SEEDING.
Stand. Good Fair Poor None
Plant vigor. Good Fair Poor
Growth (Height)
Weed Competition. Light Medium Heavy
Weather condition since seeding. Favorable Unfavorable
Amount and distribution of rainfall
Comments
4. RESULTS 90 DAYS AFTER SEEDING.
Stand. Good Fair Poor None
Plant vigor. Good Fair Poor
Growth (Height)
Weed competition. Light Medium Heavy
Weather condition since seeding. Favorable Unfavorable
Amount and distribution of rainfall
Comments

Reported by
Title

(Date)

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Report of Field Planting or District Seed Increase Planting

Trial No. _____

Featured Species and Identification _____

Soil Conservation District _____ Resource Area _____

Cooperator _____
(Name and Address)

Date Seeded or Planted _____ Amount Provided _____

Bring Soils Information up to Date: _____
(Standard Mapping Symbols) (Capability Units)

(Series and Type)

Record Important Soil Characteristics Which Have Influenced This Planting,
i. e., Depth, Texture, Fertility Level, Wetness, pH, etc.

Circle Specific Plant Adaptation to Site: Well Poorly Not Adapted

Circle Weather Conditions: Favorable Unfavorable Ppt Amt. _____ 4Ea _____

Describe Past Seasons' Weather, i. e., Distr. of Ppt., Frost, etc.

Yields/A AUM's _____ (Circle) Pounds: Beef Lamb Milk _____;
Hay Forage _____

Seed/A _____ #; Total _____ #; Circle Class: Registered Certified
Not Certified.

Management (Circle): Excellent Satisfactory Unsatisfactory

Narrative Statement: On Culture, Stand, Irrigation, Disease, Cooperator's
Opinion, Fertilizer, Season of Use, etc.

List Photographs: _____

Comparison with Standard (Circle): Superior Same Inferior.

Inspected by _____ Date _____

1/10/57 Rev.

Soil Conservation Service

PLAN FOR SEED INCREASE PLANTING

SPECIES _____ File No. _____
 Acc. No. _____

GROWER _____ SCD _____

Name & Address _____ Name _____ Number _____
 ACRES PLANNED _____ AMOUNT OF MATERIAL NEEDED _____

Farm Plan No. _____ Field No. _____ Site: Soil Type _____ LUC Class _____

Precipitation _____ ins. Irrigation or Dryland. Elevation _____ ft.

GROWER'S experience with similar types of production _____

Equipment (yes or no): Seeding _____; Cultivating _____; Harvesting _____

Where will seed be cleaned? _____

CULTURE: Give crop history by years of field for the past 5 years.

Seedbed preparation planned: _____

Seeding method (drilling, broadcast, row spacing): _____

Seeding date: _____ Seeding rate: _____

Fertilizer (Kind, Method, Date, and Rate of Application): _____

WEEDS: What noxious or other weeds are present? _____

What methods of control are to be used: cultivation, selective
 sprays, hand? _____

Expected yields by years: _____

Have District Directors approved farmer for District seed production? _____

GROWER UNDERSTANDS THAT THE SOIL CONSERVATION SERVICE ASSUMES
NO RESPONSIBILITY FOR RISKS IN PRODUCTION OR FOR POSSIBLE DEMANDS,
MARKETS OR PRICE OF SEED PRODUCED.

GROWER _____ Date _____

(Signature)

SUBMITTED BY _____ Date _____

APPROVED BY _____ Date _____

(Area Conservationist)

Date _____

(Plant Materials Technician)

TABLE _____
 LAND STATUS AND ACREAGE BY USES
 19__ Fiscal Year

LOCATION	ACRES					
	SEED PRODUC- TION	FALLOW OR COVER- CROP	OBSERVATIONAL	OCCUPIED BY BLDGS. AND YARDS	OTHERS	NOT 'USABLE' TOTAL

COLLECTION, PRODUCTION AND DISTRIBUTION DATA FOR THE
PLEASANTON PLANT MATERIALS CENTER FOR THE FISCAL YEAR 19__

USABLE MATERIAL ONLY UNLESS OTHERWISE INDICATED	PLANTS (No.)	SEED (lbs.)
	WOODY' HERBACEOUS	WOODY' GRASS' LEGUMES & MISC.

PRODUCTION

Produced in Centers
Collected in Center
Wildings collected
Cuttings collected
Purchased by Centers
Received from Other States
Received from Other Agencies
Received from Other Centers
Brought over from Previous
Years

Total Available

DISTRIBUTION

Planted by Centers
L. U. Projects
Districts
Other SCS States
Other Federal Agencies
Non-Federal Agencies
Other Centers
Seed Increase Plantings
Foundation Seed
Field Plantings
Carried Over
Loss by Grading
Surveyed

Total Distribution

19 -19 Season

Date _____

•

DATE _____

DISTRIBUTION AND DELIVERY RECORD

(Seeds and Plants)

Delivered to _____
(Project or individual) (Address)

Ordered by _____ Date _____ Shipped to _____

Shipped from _____ Date shipped _____

Parcel Post ☐ Freight ☐ Express ☐ Govt. B/L No. _____ Other _____

ACCESSION No.	SPECIES	HOW PACKED	SEEDS (POUNDS)		PLANTS (NUMBER)
			Clean	Uncleaned	

Storage facility from which delivered: _____

Order prepared by _____ Filled by _____ Checked by _____

Received by _____ Approved by _____
(Signature) (Signature)

(Title)

(Title)

AN ORDER MUST COVER ALL DELIVERIES OF CONSEQUENCE
ORIGINAL (To be sent to consignee)



